

**Abstract ID :** 67

**Title :** Attendance patterns of juvenile Steller sea lions (*Eumetopias jubatus*) in the Gulf of Alaska and Aleutian Islands derived from satellite dive recorders (SDR's)

**Category :** Ecology

**Student :** Not Applicable

**Preferred Format :** Oral Presentation

**Abstract :** The attendance patterns of juvenile Steller sea lions were determined to assess changes in behavior that could be related to weaning and development of diving, using time line data collected from sixty-five satellite dive recorders (SDR's) between 2000 and 2002. Each SDR time line message covered a 24-hour period that was divided into 72 twenty-minute increments which indicate if the animal was either hauled out (dry) or at sea (wet). Due to the large amount of data received (252,864 records), an algorithm was developed that determined arrival and departure times for each wet and dry event and the duration of that event, allowing us to automate the process of describing attendance patterns. Attendance patterns were compared among sex, geographic regions (Kodiak Island, eastern Aleutian islands and central Aleutian Islands), age (5 - 27 months) and year using repeated measures ANOVA. Individuals tended to haul out just after sunrise (mean time GMT winter = 17:14, summer = 14:10) and departure times coincided with dusk (mean time GMT winter = 3:20, summer = 5:10). The mean duration on shore was 9.20 hours and did not differ among sex, year, region or age. Time spent at sea varied greatly between individuals (mean = 8 hours, range 3.68 - 25.36 hours), and trips made in the central Aleutian Islands were significantly longer than trips from the eastern Aleutian Islands ( $p = 0.017$ ) and near Kodiak Island ( $p = 0.09$ ). Duration of at sea events at Kodiak Island were longer in 2002 than in 2001 ( $p = 0.01$ ) and trip durations of 9-12 month olds were greater than trip durations of 5 - 8 month olds. Changes in attendance patterns of young sea lions can be related to both physiological and environmental factors. Understanding changes in the behavior of young animals during this time may lead to a better overall understanding of the decline.